23359 S/058/61/000/006/047/063
A001/A101

9.4160

AUTHORS: Kozyrev, B.P., Kusakin, V.P.

TITLE: Bombarding of rectifier photocells with electrons

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1961, 351, abstract 6Zh193 ("Izv. Leningr. elektrotekhn. in-ta", 1960, no. 44, 100 - 105)

TEXT: The authors present the results of measuring induced current arising in the circuit of a rectifier photocell as a result of bombarding its surface with 2 - 14 kev electrons. Measurements were carried out for rectifier photocells made of Ge, Si and CdTe. The authors investigated dependence of induced current on bombarding electron energy, voltage applied to electrodes, and on current intensity in the bombarding electron beam. It is shown that induced current rises sharply with increasing energy of bombarding electrons, attaining (at energy 14 kev) the values exceeding by 2 or 3 orders of magnitude the bombardment current. It rises also with increasing voltage applied to electrodes and increasing bombardment current. A relation between induced current and frequency of pulses of bombardment current (within the range from 0 to 1,500 cps) was obtained. Frequency characteristics proved to be the best for Si-photocells.

[Abstracter's note: Complete translation]

Card 1/1

9,4177 (1051)

30218
S/194/61/000/007/034/079
D201/D305

AUTHORS: Kozyrev, B.P. and Sozina, N.N.

TITLE: A study of germanium photo-resistances

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 24, abstract 7 G155 (Izv. Leningr. elektrotekhn. in-ta, 1960, no. 44, 106-118)

TEXT: Basic parameters and characteristics were determined of germanium photo-resistors ФС (FS), cut out of monocrystals of n- and p-type germanium. The wafers had various ρ and are of 12-100 mm^2 and a thickness of 0.23 - 0.43 mm and were cooled by liquid nitrogen. The following were determined: Volt-ampere, light, spectral, frequency and temperature characteristics. The dark resistance, sensitivity andother parameters of those photo-resistances were also determined, all at temperatures of 290, 90 and 77°K. It was found that germanium photo-resistors have quite a high sensitivity at room temperatures, reaching 0.1 a/lum. or ~ 1 amp/watt at E = 100 lux

Card 1/2

30118
S/194/61/000/007/034/079
D201/D305

A study of germanium...

and U ≳ 8 V. They exhibit also a smaller inertia in comparison with other types of photo resistors and must have heat sinks because of considerable dark currents. A study has also been made of germanium photo resistors with accurately known impurities, when cooled to 90°K. The photo resistive samples were prepared of high resistivity n-type germanium with Sb and Sb-Au doping. 17 references. [Abstracter's note: Complete translation]

Card 2/2

23360 S/058/61/000/006/049/063
A001/A101

26.2358 (omit 2317)

AUTHORS: Kozyrev, B.P., Khrisanfova, L.P.

TITLE: A vacuum-tight joint

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1961, 394, abstract 6Zh239 ("Uch. zap. Leningr. elektrotekhn. in-ta", 1960, no. 44, 119 - 132)

TEXT: The authors describe the results of investigating the tightness of joints obtained as a result of gluing by epoxy resins of glass with glass and glass with crystalline materials (KBr, KRS-5, etc). Epoxy resin ЭД -6 (ED-6) after degassing was mixed with a hardener in the form of triethanolamine in a weight ratio of 10:1 at 70°C, and the spot to be glued was pasted with this mixture. Leakage through the joint was checked with a radiation thermoelement. It was discovered that epoxy resin assured an extended preservation of high vacuum in glass-glass joints, provided that the glued seam had been heated at 120°C. Seams formed at gluing with epoxy resin of openings in KBr and KRS-5 with glass possess a high mechanical strength. To avoid splitting of KBr, interlayers of AgCl or Duraluminum were used. Seam heating at a temperature of 120°C is necessary also in this case to assure a good tightness. There are 10 references.

L. Abramovich

[Abstracter's note: Complete translation]

Card 1/1

31870
S/123/61/000/024/012/016
A004/A101

24.5300

AUTHOR: Kozyrev, B. P.

TITLE: Basic relations for the radiation method of temperature determination

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 24, 1961, 18, abstract 24E102 ("Izv. Leningr. elektrotekhn. in-ta", 1960, no. 44, 133-142)

TEXT: If the radiation method of temperature measurements is used for remote objects, it is necessary to determine the basic relations between the temperatures of the object being measured, background and sensitive element of the measuring device. These relations are determined for compensated thermoelements with identical surfaces, blackened on one and polished on the other side. The optical system of the device is a concave mirror with a metallic reflecting layer. The author derived a formula for calculating the dependence of the temperature difference between the active and passive layers on the object and background temperature, on their radiation coefficient, parameters of optics, atmospheric transmission, loss ratio in the radiation thermoelements. Based on an analysis of these relations, conclusions are drawn on an expedient

Card 1/2

Basic relations for the radiation ...

design of radiation thermoelements. Taking into consideration the special features of using radiation thermoelements for the measurement of very remote objects, the author recommends to use ФЭОУ (FEOU) instead of galvanometers, which ensures a sensitivity of $2 \cdot 10^{-9}$v, which corresponds to $3 \cdot 10^{-6}$ degrees. If a mirror with 20 m focal length and radiation elements with very small surfaces - 0.3 x 0.3mm - are used, the sight area diameter amounts to approximately 7 m. In this case it is possible to distinguish local temperature variations of the order of 1°C. The radiation elements developed by LETI were used to investigate the temperature distribution on the Moon surface. There are 10 references.

M. Kayander

[Abstracter's note: Complete translation]

Card 2/2

KOZYREV, B.P., doktor tekhn.nauk, prof.; VERSHININ, O.Ye., kand.tekhn.nauk

Determination of the spectral diffusive reflective capability of infrared radiation. Izv. LETI no.45:147-158 '61. (MIRA 16:5)
(Heat--Transmission) (Infrared rays)

6.3200
26.2265

S/051/61/010/005/003/006
E032/E114

AUTHORS: Kozyrev, B.P., and Kropotkin, M.A.

TITLE: A Study of Spectral Reflection Coefficients of the Coatings of Thermal Radiation Detectors in the Wavelength Region 10 - 200 μ

PERIODICAL: Optika i spektroskopiya, 1961, Vol.10, No.5, pp. 657-662

TEXT: A description is given of an apparatus for measuring the diffuse reflection coefficients R of various materials in the wavelength range 10 - 200 μ. The reflection coefficients are of interest because infra-red radiation detectors are usually in the form of, say, a metal foil which is blackened in order to increase its absorbability, and the properties of this coating determine both the spectral and the integral sensitivity. Fig.1 shows the optical arrangement employed. The apparatus is based on the method described by the first of the present authors and O.Ye. Vershinin in this journal, Vol.4, 542, 1959. Radiation from the source Г is reflected by the spherical mirror З3 and plain mirror З4 and is focussed on the entrance slit S_1 of the

20874

S/051/61/010/005/003/006
E032/E114

A Study of Spectral Reflection Coefficients of the Coatings of Thermal Radiation Detectors in the Wave Length Region 10 - 200 μ

monochromator. After multiple reflection from the crystal plate B and the spherical mirrors $З_1$ and $З_2$, the radiation leaves through the slit S_2 and is focussed on the specimen under investigation by the mirrors $З_5$ and $З_6$ through an aperture in the mirror hemisphere. The radiation reflected by the specimen is focussed by this hemisphere onto a detector. The entire apparatus is mounted on a heavy steel plate and is covered by a glass bell-jar which is then evacuated to a pressure of 0.05 mm Hg. The monochromator is so designed that by changing the angle between the spherical mirrors $З_1$ and $З_2$ (as shown by the arrows 1 - 1) one can alter the number of reflections from the crystal plate from 1 to 7 and hence adjust the degree of monochromatization. In order to separate out isolated narrow wavelength ranges from the continuous spectrum, eight different crystal plates were prepared. These crystals are listed in Table 1 which also gives the wavelengths corresponding to maximum reflection and the wavelength range after multiple reflections

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S/051/61/010/005/003/006
E032/E114

A Study of Spectral Reflection Coefficients of the Coatings of Thermal Radiation Detectors in the Wavelength Region 10 - 200 μ

from the given crystal. The number of reflections from fused quartz, LiF, CaF_2, NaF and KRS-5 was 5, while the number of reflections for the remaining crystals was 3. The crystal plates can be replaced in situ, and the specimen under investigation and the final detector are placed on a rotatable table under the spherical mirror. In the first position of the table the radiation falls on the specimen under investigation. The table is then rotated through 180° and the specimen is thus replaced by the detector. The ratio of the signals obtained in two positions gives the diffuse reflection coefficient. A detailed description of the apparatus was given by the present authors in Ref.9. In order to reduce the effect of scattered short wavelength radiation, smoked polyethylene and quartz crystal filters were employed. The first material investigated was kerosene black. The specimens were deposited on strips of brass leaf (1.5 cm^2) which were then placed in contact with pieces of copper in order to reduce the heating of the specimen by the incident radiation.

S/051/61/010/005/003/006
E032/E114

A Study of Spectral Reflection Coefficients of the Coatings of Thermal Radiation Detectors in the Wavelength Region 10 - 200 μ

The reflection coefficient was investigated as a function of wavelength and the different deposition conditions. Fig.2 shows the diffuse reflection spectra of kerosene black deposited under the various conditions indicated in Table 2. In Table 2, g is the thickness of the deposit in mg/cm^2, g_M is the amount of oil placed on the brass foil before the deposition of the specimen (in mg/cm^2) and h_{cp} is the average thickness of the deposit as measured with a microscope. It was found that the diffuse reflection coefficient is very dependent on the deposition conditions and it is recommended that: (1) The deposits should be sufficiently thick, e.g. not less than 0.5 mg/cm^2; (2) a preliminary oil deposit is desirable; (3) strong smoking flame should be employed. (NOTE: Numeration in Fig.2 is the same as in Table 2). Another material employed was a mixture of kerosene black with the 54-2 (BF-2) glue. Table 3 gives the values of g, g_c and h_{cp} for the various specimens (g_c is the amount of kerosene black in the mixture).

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20674

S/051/61/010/003/003/006
E032/E114

A Study of Spectral Reflection Coefficients of the Coatings of Thermal Radiation Detectors in the Wavelength Region 10 - 200 μ

The corresponding spectra are shown in Fig.3. The roughly equal reflection coefficients of the deposits with g > 0.6-0.7 mg/cm^2 are due to the presence of fine cracks in the deposit. This was verified by transmission experiments.
There are 5 figures, 3 tables and 9 references: 3 Soviet and 6 non-Soviet.

SUBMITTED: July 22, 1960

Table 1

Crystal	SiO_2	LiF	CaF_2	NaF	KC	KBr	CsI	KRS-5
λ_{max} (microns)	9	26	32	36	62	83	145	180
$\Delta\lambda$ (microns)	2	10	9	10	15	18	20	30

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40505

24.3300

S/263/62/000/013/010/015
1007/1207

AUTHORS. Kozyrev, B. P. and Vershinin, O. E.

TITLE. Determination of the spectral diffusive reflectance of infrared radiation

PERIODICAL Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no 13, 1962. 53, abstract 32.13.391. (Izv. Leningr. elektrotekhn. in-ta, no. 45, 1961, 147-158)

TEXT A review of methods for measuring diffusive reflectance is given, and the peculiarities of measuring the reflectance by means of a hemispherical mirror (condenser) are studied These peculiar features have been taken into account in the design of a special measuring unit by the vacuum-tube laboratory of Leti.The receiver of this unit is a special radiator with a large heat-absorption area; the hemispherical mirror has a diameter of 150 mm The image of the exit slit of the monochromator on the test specimen is 2 × 12 mm. In the plane of optimum focusing the sizes of the reflected image were chosen so as to ensure complete absorption of the heat energy by the thermal element with an absorption surface of 2 × 14 mm.To eliminate radiation losses during reflection from the mirror, both the receiver and test specimen were fixed at an angle of ~ 4° to the plane of the great circle of the hemisphere A special iris diaphragm with a 100 mm opening permits the variation of the angle of the incident radiation beam. Experiments with a lamella of magnesium oxide, carried out over the visible and near-infrared region showed that, when the diameter diaphragm was changed,

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the reflection coefficients coincided with the rated values (with an accuracy of ± 0.5%). During reflection from the mirror surface, particularly from aluminum mirror, these coefficients remained constant when the diaphragm was reduced to 35-40 mm; only at lower values they dropped sharply. The unit worked in combination with the UKC-11 (IKS-11) infrared spectrometer. The sensitivity of the entire device permitted records to be made of radiation intensities down to 10^{-8} watt; reading discrepancies did not exceed ± 1.0%. There are 3 figures and 17 references.

[Abstracter's note: Complete translation.]

KROPOTKIN, M.A.; KOZYREV, B.P.

Spectral coefficients of reflection and sensitivity of silicon phototubes. Izv.vys.uch.zav.; fiz. no.4:118-122 '62.
(MIRA 15:9)

1. Leningradskiy elektrotekhnicheskiy institut imeni Ul'yanova (Lenina).
(Photoelectric cells)

KOZYREV, B.P.; KROPOTKIN, M.A.

Diffuse reflection from white coatings highly absorbing infrared radiation. Opt. i spektr. 14 no.1:152-155 Ja '63. (MIRA 16:5)
(Reflection (Optics)) (Infrared rays)

L 13587-63 EWT(1)/BDS/EEC(b)-2/EWD-2 AFFTC/ASD/APGC/AFWL/SSD PI-4 IJP(C)

ACCESSION NR: AP3004031 S/0139/63/000/003/0018/0022

AUTHOR: Kosyrev, B. P.; Mezenov, A. V.

TITLE: Transparency of gases in the infrared spectral region for short distances

SOURCE: IVUZ. Fizika, no. 3, 1963, 18-22

TOPIC TAGS: gas transparency, infrared gas spectra, infrared attenuation, infrared air propagation

ABSTRACT: A method of residual rays was used to evaluate infrared attenuation in air at temperatures of 19-20°, pressures of 750—760 mm Hg, relative humidity of 5—80% and thicknesses of 5—100 m. The wavelength range was 15—200 μ. The apparatus used consisted of a speedometer, a vacuum chamber at $3 \cdot 10^{-2}$ mm Hg, and several receiving devices. Plates made of SiO_2, LiF, CaF_2, NaF, NaCl, KBr, CsI, and KRS-5 crystals were set in the monochromator for the reception of the residual rays. It was found that 1) the absorption of infrared rays increases rapidly with distance for the first 10—20 m and then increases monotonically with distance at a low rate, and 2) transparency decreases in the 20—80-μ spectral region and slightly increases in the 100—200-μ region. Orig. art. has: 5 figures and 1 table.

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ASSN: Leningrad Electrotechnical Inst.

E 18986-63 EWT(1)/BDS AFFTC/ASD/ESD-3/APGC/IJP(C)/SSD

ACCESSION NR: AP3005685 S/0146/63/006/004/0123/0130

61
60

AUTHOR: Kropotkin, M. A.; Kozy*rev, B. P.

TITLE: Outfit for investigating spectral reflection of dispersing materials in the longer-wave infrared band

SOURCE: IVUZ. Priborostroyeniye, v. 6, no. 4, 1963, 123-130

TOPIC TAGS: dispersing material, infrared spectroscopy, spectroscopy, spectral reflection, spectral coefficient

ABSTRACT: A new outfit is described for measuring the spectral coefficients of diffuse reflection of various materials in the longer-wave infrared band; diffraction gratings are used for monochromatization of radiation. The monochromator of the new outfit is similar to the DIKS-1 infrared spectrometer while the measuring part of the outfit was described by these authors earlier (Optika i spektroskopiya, 1961, v. 10, no. 5, p. 657). A functional diagram is presented

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L 18986-63

ACCESSION NR: AP3005685

and explained in the article, as well as a circuit diagram of the electrical supply. Four 200x200-mm diffraction gratings, 1:2.5 aperture ratio, 1.5-5/cm resolution, and $4x10^{-10}$ -w sensitivity of the receiver-recorder permit investigating various solid, free-flowing, and even liquid materials within a 20-400-micron band. Orig. art. has: 5 figures, 1 formula, and 2 tables.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 07Dec62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: PH NO REF SOV: 007 OTHER: 000

Card 2/2

KOZYREV, B.P.

Basic problems of radiation pyrometry of slightly heated or cooled objects. Inzh.-fiz.zhur. 6 no.10:9-18 O'63. (MIRA 16:11)

1. Elektrotekhnicheskiy institut imeni Ul'yanova-Lenina, Leningrad.

L 52038-65 EWT(1)/EEC(m)/EWG(v)/EWA(h) Po-4/Pe-5/Pq-4/Pg-4/Pae-2/Pad/
Pi-4/Pl-4 GS/GW

ACCESSION NR: AT5011156 UR/0000/64/000/000/0055/0059 51

AUTHOR: Katulin, V. A.; Kozyrev, B. P.; Malkevich, M. S.; Faraponova, G. P.; 50
Rozenberg, G. V. (Professor) B+1

TITLE: Airplane device for measuring radiation balance and some results of measurements

SOURCE: Mezhvedomstvennoye soveshchaniye po aktinometrii i optike atmosfery. 5th, Moscow, 1963. Aktinometriya i optika atmosfery (Actinometry and atmospheric optics); Trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 55-59

TOPIC TAGS: radiation pulsation, radiation thermoelectric element, terrestrial radiation, atmospheric radiation, upwelling radiation, downwelling radiation, albedo

ABSTRACT: Pulsations of shortwave and longwave radiation fluxes have been measured by a Kozyrev, small, vacuum, thermoelectric radiometer with a 180° scope. This device measured solar shortwave and terrestrial and atmospheric longwave radiation. Regions of strong absorption by water vapor were found and separated. The device measured upwelling and downwelling radiation fluxes during airplane flights above steppe and sea regions with clear and cloudy skies. A decrease in the downwelling flux was observed in the atmospheric layer 1—3 km above both regions. A very slight decrease in the

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L 52038-65

ACCESSION NR: AT5011156

downwelling flux was observed above the clouds in the 3--5-km atmospheric layer. A decrease in the upwelling flux was also observed in this layer. Pulsations of cloud albedo were measured and found to vary greatly. Orig. art. has: 3 figures and 1 table. [EO]

ASSOCIATION: Institut fiziki atmosfery AN SSSR, Moscow (Institute of the Physics of the Atmosphere, AN SSSR)

SUBMITTED: 25Nov64 ENCL: 00 SUB CODE: ES

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4009

mc
Card 2/2

L 1059-66 EWT(m)/EPF(c)/ETC/EWG(m)/T/EWP(t)/EWP(b) IJP(c) DS/JD

ACCESSION NR: AR5006994 S/0275/65/000/001/A002/A003

621.385.7

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Sv. t., Abs. 1 A12

AUTHOR: Kozyrev, B. P.; Loshakova, V. V.

TITLE: Sphere method for determining the total radiation factor of oxides

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vyp. 52, 1964, 91-99

TOPIC TAGS: oxide cathode, total radiation factor

TRANSLATION: The sphere method used for determining the total radiation factor of an oxide-coated cathode has a great advantage in that it permits uniform heating of the radiating surface by means of a small electric heater and also permits exact evaluation of the surface size. A hollow-sphere specimen is prepared from the test material, and a helical heater is inserted into the sphere. Thusly mounted sphere is placed into a vacuum envelope. As the measurements are made in a high vacuum, the power radiated by the sphere can be regarded as equal to the total power supplied to the heater. The surface temperature of the specimen is measured by an optical pyrometer, thermocouple, or by some other means. The effect

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L 1059-66

ACCESSION NR: AR5006994

of temperature on the total radiation factor of pure nickel, various backings for oxides, and modern oxides up to 100 micron thick was investigated. The results show that the radiation comes not only from the surface of the oxide coating but also from its depth layers and also from the base metal and those barrier layers which are formed at the base-oxide boundary during the process of cathode activation. Bibl. 3.

SUB CODE: GP, EC ENCL: 00

Card 2/2 DP

L 00002-66

ACCESSION NR: AR5005448 S/0275/64/000/012/A012/A013

621.529

19

B

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 12A68

AUTHOR: Grunin, V. K.; Kozyrev, B. P.

TITLE: Infrared gas analyzer with an FEOU-18 amplifier

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vyp. 52, 1964, 100-106

TOPIC TAGS: gas analyzer, infrared gas analyzer

TRANSLATION: An attempt has been made to design a laboratory gas-analyzing outfit with a high sensitivity ensured by a greater path passed by the radiation in an absorbent, by a sensitive radiation receiver, and an FEOU-18 amplifier. A principal diagram of the outfit is given. A low-voltage incandescent lamp with a glass ballast transmitting 0.4—2.5-micron radiation is used as a source of radiation. A possibility is provided for using a lamp with a NaCl window which

Card 1/3

transmits the radiation up to a 17-micron wavelength. The radiated power of the source can be adjusted within 3.5—9 w. The radiation of the source placed in the focus of two spherical mirrors is divided by the mirrors into two parallel beams which pass measuring and compensating cells. Thereupon, both beams are focused, by means of a second similar pair of mirrors, on a vacuum radiation thermoconverter which supplies its signal to the FEOU-18 amplifier. If there is no gas in the measuring cell, or if equal amounts of gas are present in both cells, the output-radiation intensities of both beams are identical, the correctly compensated receiving thermocouples generate equal emf's, and no signal comes to the amplifier. When a radiation-absorbing gas is introduced into a measuring cell, the radiation traversing it is attenuated, and the thermoconverter sends to the amplifier a signal proportional to the absorbed radiation. The outfit is equipped with a vacuum system which permits exhausting the cells down to 0.01 torr where the effect of the atmospheric-air absorption becomes practically nil. This permits measuring both a gas mixed with air and a pure gas. Gas is admitted into the measuring cell through a special batcher permitting an output

L 00002-66
ACCESSION NR: AR5005448

pressure 4000 times lower than the input pressure. For example, with an input batcher pressure of 0.76 torr, the measuring cell receives 1.9×10^{-4} torr. A general appearance of the outfit is shown. The first experiments involved carbon dioxide, and a high sensitivity of the outfit to this gas was proven. For example, a carbon-dioxide concentration of 0.066% caused a galvanometer deviation of 650 mm (with a zero-point drift of 40 mm), which is equivalent to a threshold sensitivity of 0.004%. Bibliography: 10 titles.

SUB CODE: IE, EC ENCL: 00

Card 3/3

L 3302-66 EWT(l)/EWT(m)/EWP(t)/EWP(b)/EWA(h) IJP(c) JD

ACCESSION NR: AR5008346 S/0275/65/000/002/B032/B033
621.383.42

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 2B211

AUTHOR: Kozyrev, B. P.; Kovaleva, M. K.

TITLE: Photoresistor from tallium* bromide-iodide with a parallel arrangement of its elements

CITED SOURCE: Izv. Leningr. elektrotekh. in-ta, vyp. 52, 1964, 107-114

TOPIC TAGS: photoresistor, tallium bromide iodide photoresistor / KRS 5 crystal

TRANSLATION: KRS-5 crystals (tallium bromide-iodide) have a high electric sensitivity at sufficiently low temperatures. Preliminary investigations have shown that, with greater interelectrode distances, the photosensitivity decreases for the same field strength. In order to increase the receiving area and the absorption, a construction was developed with a parallel arrangement of elements in the form of 15x6x1 mm plates. The photoresistor was placed in a Dewar and

Card 1/2 *[Thallium]

L 3302-66
ACCESSION NR: AR5008346

cooled with liquid oxygen and nitrogen. The light characteristics (0—0.35 lux for voltages 100—400 v) are similar to the characteristics of conventional photoresistors. The current-voltage characteristics are linear at low voltages, but later saturate because of a heat evolution in the photoresistor. The spectral-sensitivity curves have a maximum of 400—600 amp/w near 0.5 micron and fall off at 0.4—0.65 micron. The photosensitivity strongly depends on temperature within 0 to -196C which can be explained by the higher number of carriers liberated by the light and by an increase in their free path.

SUB CODE: EC ENCL: 00

Card 2/2

KOZYREV, B.P.

Multijunction radiation thermo-elements for measuring high-power radiation from a half-space in the [illegible] regions 0,3 - [illegible].5μ and 2.5--40μ. Trudy [illegible] no. [illegible]

(MIRA [illegible])

ACCESSION NR: AP4043566 S/0146/64/007/004/0114/0119

AUTHOR: Kozy*rev, B. P.; Mezenov, A. V.

TITLE: A device for studying radiation decrease by air-suspended particles

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 4, 1964, 114-119

TOPIC TAGS: electromagnetic radiation, aerosol, optical instrument, suspended particle, intercepting filter, diffraction grating, refraction index

ABSTRACT: The Leningrad Electrotechnical Institute imeni V. I. Ul'yanov (Lenin) has developed an optical instrument for measuring the decrease in radiation due to suspended water drops. The main purpose of this task was to check the theoretical estimates of the interaction between electromagnetic radiation and spherical particles having a complex refraction index. The technique used to obtain monochromatic radiation included remanent rays, intercepting filters, and diffraction grating. The instrument can be used for studying the principles underlying the reduction of radiation in the wavelength

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ACCESSION NR: AP4043566

range of 0.5 to 1000μ . Test results obtained were in full agreement with the theoretical data for a relatively wide range of indices of the refraction and absorption of spherical particles. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Leningradskiy Elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute)

SUBMITTED: 11May63 ATD PRESS: 3089 ENCL: 00

SUB CODE: EM, OP NO REF SOV: 005 OTHER: 004

Card 2/2

L 13629-65 EWT(1)/EPA(w)-2 Pab-10 AEDC(a)/ESD(gs)/ESD(t)

ACCESSION NR: AP4048297 S/0146/64/007/005/0122/0127

AUTHOR: Kropotkin, M. A.; Kozyrev, B. P.

TITLE: Methods of work and results of investigation of the spectral reflection of scattering materials in the long-wave infrared region

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 5, 1964, 122-127

TOPIC TAGS: spectral reflection, scattering material, infrared spectral region

ABSTRACT: This is a continuation of the authors' report published in "IVUZ. Priborostroyeniye," v. 6, no. 4, 1963. Radiation losses are due to: (a) optical system aberration; (b) escape of a part of reflected radiation through the inlet port; (c) screening effect of the indicator rim. Steps to minimize the effects of the above losses are discussed. The procedure of making measurements is described, and a formula for calculating the spectral reflection factor is developed. Curves of the spectral reflection from loam, sand, and brick at

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L 13629-65
ACCESSION NR: AP4048297

20—100 microns are presented, as well as curves for fluorite at 20—42 microns. The latter results are in good agreement with those published by A. Mitsuishi, et al. (J. Opt. Soc. Amer., 1962, v. 52, no. 1). The overall error in determining reflection factors is believed to be 8—10%; repeated measurements on the same specimen revealed a spread of ± (3—5)%. Orig. art. has: 3 figures and 6 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 24Dec63 DATE ACQ: 00 ENCL: 00

SUB CODE: OP NO REF SOV: 002 OTHER: 002

Card 2/2

L 12137-65 EWT(1)/EWT(m)/EWG(v)/EMA(d)/EWP(t)/T/EEC(t)/EEC(b)-2/EWP(b)/ESD(5)-3 Pl-4 IJP(c)/ASD(a)-5/BSD/AS(mp)-2/AFGC(b)/SSD/AEDC(a)/ESD(gs)/ESD(t) MJW/JD

ACCESSION NR: AP4047448 S/0170/64/000/009/0108/0112

AUTHORS: Kropotkin, M. A.; Kozyrev, B. P.

TITLE: Determining emissivities of materials by their infrared reflection spectra

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 9, 1964, 108-112

TOPIC TAGS: infrared spectrum, emission spectrum, emissivity, monochromatic radiation, black body, MA 8 material, D 16 duralumin

ABSTRACT: The authors computed the spectral and integral emissivities of solids using data from their infrared reflection spectra. The following relations were used:

$$\varepsilon_{\lambda T} = 1 - R_{\lambda T},$$

$$\varepsilon_T = \int_0^\infty I_{\lambda T}\, d\lambda \Big/ \int_0^\infty I_{0\lambda T}\, d\lambda = \int_0^\infty (1 - R_{\lambda T}) I_{0\lambda T}\, d\lambda \Big/ \int_0^\infty I_{0\lambda T}\, d\lambda,$$

where $\varepsilon_{\lambda T}$ is the spectral emissivity of the real body, $R_{\lambda T}$ the spectral reflection coefficient, ε_T the integral emissivity, $I_{0\lambda T}$ and $I_{\lambda T}$ the respective intensities of monochromatic radiation for a wavelength λ for a black body and a real body at temperature T. Using the approximate relation

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L 12437-65

ACCESSION NR: AP4047448

$\varepsilon_T \simeq \sum_{\lambda_1}^{\lambda_2} (1 - R_{\lambda T}) I_{0 \lambda T} \Delta\lambda \Big/ \sum_{\lambda_1}^{\lambda_2} I_{0 \lambda T} \Delta\lambda$, the spectral and integral emissivities were calculated for various materials at 293K. Some of the integral coefficients computed were as follows: polished light red brick—0.84, sand—0.6, dark brown soil—0.88, pine wood—0.9-0.9, MA-18 covered by duralumin D-16—0.28. Orig. art. has: 4 formulas, 3 figures, and 2 tables.

ASSOCIATION: Elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) g. Leningrad (Leningrad Electrotechnical Institute)

SUBMITTED: 24Dec63 ENCL: 00

SUB CODE: MT NO REF SOV: 005 OTHER: 000

Card 2/2

L 19638-65 APGC(b)/SSD(c)/AEDC(a)/AFMD(t)

ACCESSION NR: AP4043015 S/0051/64/017/002/0259/0264

AUTHORS: Kropotkin, M. A.; Kozyrev, B. P.

TITLE: Investigation of the reflection spectra of natural and artificial materials in the wavelength region 0.7 to 100 microns

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 259-264

TOPIC TAGS: reflected radiation spectrum, ir spectrum, ir spectrometer, ir grating measurement device, spectral reflection

ABSTRACT: Results are reported of investigations of reflection spectra of sand, soil, brick, asphalt, concrete, and vegetable matter over a wide range of infrared wavelengths (0.7--100 microns). Investigations up to 20 microns were made with an attachment to the IKS-12 infrared spectrometer, the main element of which is a hemispherical mirror. The long-wave portion of the spectrum was investigated with the aid of a special setup, described in detail else-

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ACCESSION NR: AP4043015

where (Izv. vuzov SSSR, Priborostroyeniye, v. 6, 128, 1963). Echelette-type gratings were used for monochromatization of the radiation in this setup. All the substances investigated exhibit selective reflectivity, and the individual features of each substance are discussed briefly, as is the accuracy of the measurements and its dependence on various extraneous factors. Orig. art. has: 4 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 18Sep63 ENCL: 05

SUB CODE: OP NR REF SOV: 001 OTHER: 005

Card 2/2

L 2725-66 EWT(1)/T/EED(b)-3/ETC(m) IJP(c) WW

ACCESSION NR: AP5017174 UR/0139/65/000/003/0027/0029

AUTHOR: Kropotkin, M. A.; Kozyrev, B. P.

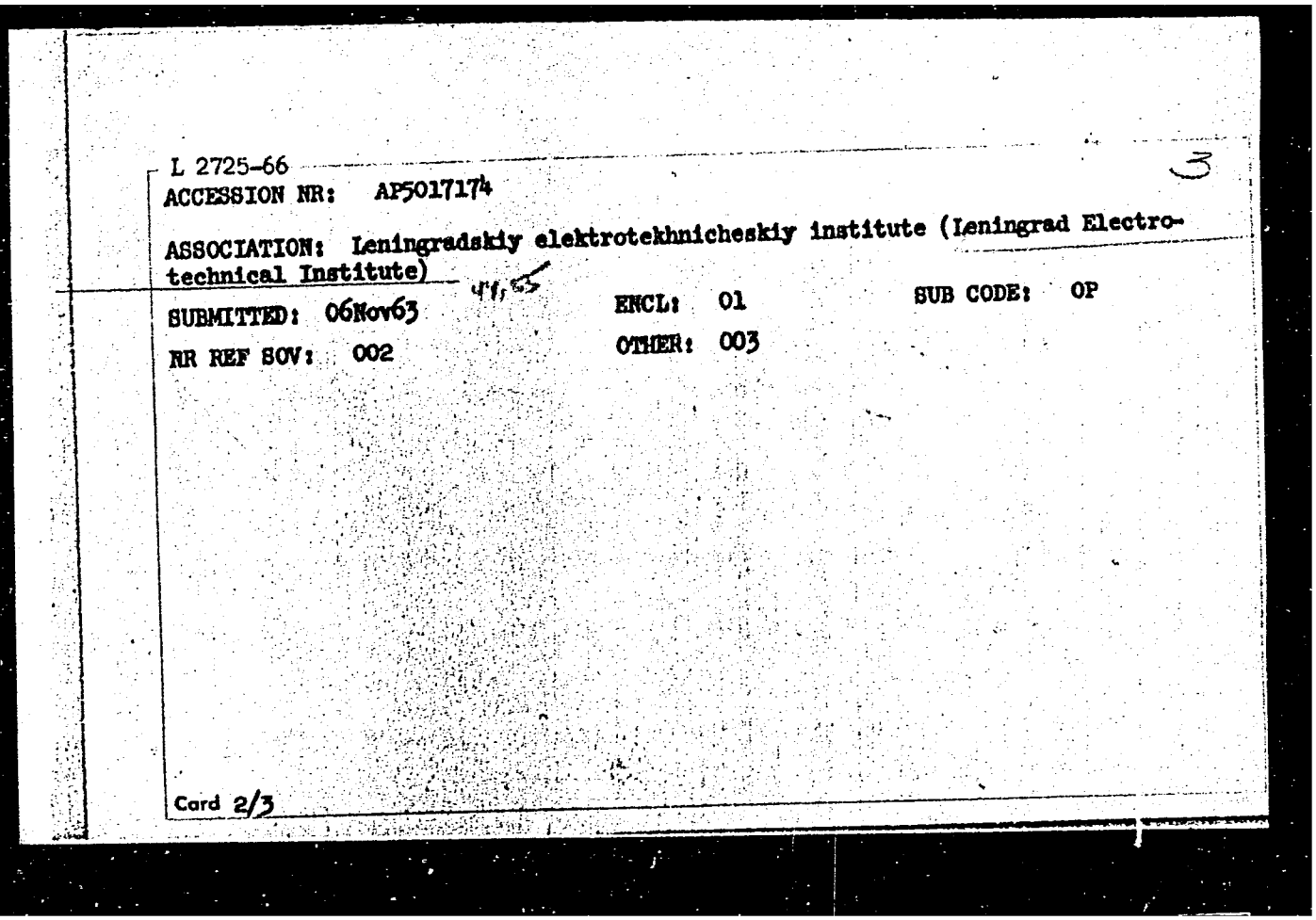
TITLE: Determination of the spectral coefficients of reflection of friable materials in the wavelength range 0.7--15 μ

SOURCE: IVUZ. Fizika, no. 3, 1965, 27-29

TOPIC TAGS: ir spectrometer, ir spectrum, spectrum analysis, soil

ABSTRACT: The authors describe a new attachment for an infrared spectrometer (IKS-12), based on the use of the mirror-type hemisphere which they employed earlier (Optika i spektroskopiya v. 4, 542, 1959) to measure the spectral reflection coefficients of diffusedly-scattering materials. The attachment is shown in Fig. 1 of the Enclosure and its operating principle is similar to that described in the earlier paper. The equipment was used to measure the reflection of sand and soil at wavelengths 0.7--15 μ. It is shown that the loss of reflected radiation can be taken into account by introducing special coefficients, equations for which are derived. The results indicate that the reflection spectra of sand and soil have the same character, owing to the similarity of their chemical structures. On the other hand, the results also reflect the major differences between these materials. Orig. art. has: 2 figures and 3 formulas.

Card 1/3



L 2725-66

ACCESSION NR: AP5017174

3

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institute (Leningrad Electrotechnical Institute)

SUBMITTED: 06Nov63 41,55 ENCL: 01 SUB CODE: OP

NR REF SOV: 002 OTHER: 003

Card 2/3

L 2725-66

ACCESSION NR: AP5017174

ENCLOSURE: 01

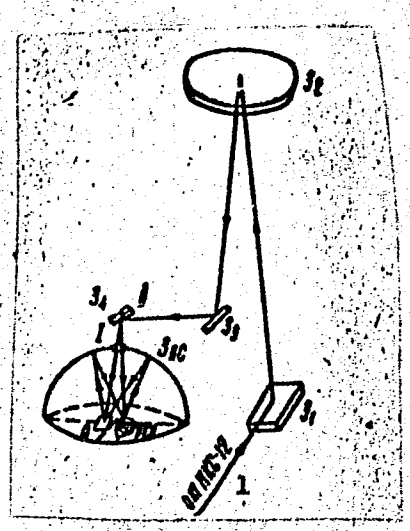


Fig. 1. Optical diagram of attachment.

3 - Mirrors, $3_{нс}$ - hemispherical mirror, 1 - from IR spectrometer.

Card 3/3

L 64317-65 EPT(1)

ACCESSION NR: AP5020216 UR/0170/65/009/001/0070/0076 3/
44,55 536.3:535.34 28
AUTHOR: Buznikov, A. A.; Kozyrev, B. P. 44,55 B

TITLE: Investigation of atmospheric absorption of radiation from a weakly heated absolutely black emitting body 21,44,55

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 9, no. 1, 1965, 70-76

TOPIC TAGS: black body radiation, heat absorption, atmospheric thermodynamics

ABSTRACT: A study was made of the passage of radiation from a black body through a horizontal atmospheric layer at distances up to 2000 meters, under field conditions. Source of radiation was a multichamber black body with a radiating area diameter of 500 mm. The receiver was a vacuum compensated thermoelement with a window made of KRS-5 crystal, and the receiving areas of the thermoelement had a diameter of 1 mm. For distances up to 125 meters a short focus optical system was used. Under the experimental conditions the temperature of the emitting black body was held constant with an accuracy up to ±1°.

Card 1/2

L 61317-65

ACCESSION NR: AP5020216

Twenty to thirty experimental points were obtained at distances from 25 to 2000 meters, and for periods of time from 50 min to 1 hour 20 min. For each measurement there were recorded the temperature of the surrounding medium, the atmospheric preassure, and the relative moisture content and the thickness of the precipitated layer of water. It was found that a change in the temperature of the black body from 323 to 580 K leads to a shift of the radiation maximum to the side of short wave lengths. The black body has a wide radiation spectrum. For example, 95% of the energy of an absolutely black body, having a temperature of 323 K, is given off over a range of wave lengths from 2 to 40 mkm. Orig. art. has: 1 formulas and 3 figures

ASSOCIATION: Elektrotekhnicheskiy institut im. V. I. Ul'yanova-Lenina, g. Leningrad (V. I. Ul'yanov-Lenin Electrotechnical Institute)

SUBMITTED: 24Nov64 ENCL: 00 SUB CODE: TD, ES

NR REF SOV: 004 OTHER: 000

Card 2/2

[illegible], B.F., doktor tekhn. nauk, prof.; [illegible], V.P., kand.

Sphere method for determining the [illegible] capacity of oxides. Izv. VUZ no.[illegible] '64. (MIRA 18:2)

GRUNIN, V.K., inzh.; KOZYREV, B.P., doktor tekhn. nauk, prof.

Infrared gas analyzer using the PKOB-1M device. Izv. IGI no.52: 100-106 '64. (MIRA 18:9)

KOZYREV, B.P., doktor tekhn. nauk, prof.; KOVALEVA, M.K., inzh.

Photoresistors from thallium bromine and thallium iodine with parallel placement of the elements. Izv. LETI no.52:107-114 '64. (MIRA 18:9)

KOZYREV, B.P.; KOKOTCHENKO, V.A.

Refractometric transducer-analyzer for CO_2 testing of gases in furnaces. Zav. lab. 31 no. 12:1524-1526 '65 (MIRA 19:1)

1. Leningradskiy elektrotekhnicheskiy institut imeni Ul'yanova (Lenina).

L 06278-67 EWT(1)

ACC NR: AP6025073 SOURCE CODE: UR/0115/66/000/006/0029/0033

AUTHOR: Vasil'yev, B. V.; Kozyrev, B. P.

ORG: none

TITLE: Using the galvanometric amplifier for measuring weak signals

SOURCE: Izmeritel'naya tekhnika, n. 6, 1966, 29-33

TOPIC TAGS: dc amplifier, galvanometer

ABSTRACT: Measuring very weak d-c signals can be effected by: (A) a d-c galvanometer and (B) a modem d-c amplifier with an output instrument. Both methods are compared on the basis of (a) minimum detectable signal limited by fluctuation noise and (b) responsiveness (reading settling time). Soviet and Western (R. V. Jones, Electronics, 1963, 61, no. 2 and J. Sc. Instr., 1961, 38, no. 2) sources have been used in the theoretical analysis. As the direct indication of very weak signals by a galvanometer is practically impossible, the A-method includes a photo-electro-optical amplifier whose characteristics are also analyzed. It is found that, with equal fluctuation thresholds of sensitivity, the amplifier containing an overdamped input galvanometer has a shorter settling time than a resonant-electron-tube or transistor amplifier. This conclusion is particularly evident in the case of a minimal d-c signal or a 1-f (below 10 cps) a-c signal. Orig. art. has: 2 figures and 17 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 001

Card 1/1 UDC: 621.375.024-621.375.126

L 35878-66 EWT(m) IJP(c)
ACC NR: AP6010770 SOURCE CODE: UR/0146/66/009/001/0017/0022

AUTHOR: Kozyrev, B. P.; Korotchenko, V. A.

ORG: Leningrad Electrotechnical Institute im. V. I. Lenin (Leningradskiy elektrotekhnicheskiy institut)

TITLE: Differential photo-electro-optical refractometer as a gas analyzer

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 1, 1966, 17-22

TOPIC TAGS: refractometer, light refraction, gas analyzer

ABSTRACT: The development of a differential refractometer for gas analyzing purposes is reported. It is based on the well-known photo-electro-optical amplifier arrangement (R. V. Jones, J. Sc. Instr., v. 38, no. 2, 1961) in which the luminous flux-converting galvanometer is replaced by a refracting gas-sample cell. Silver-sulfide photocells, a small incandescent light-source lamp, and a 25-mm diameter 32-mm long sample cell are used. The new instrument has a very high sensitivity (about 3×10^{-8}), short response time (2.5 sec), can analyze any gas, may yield information in the form of electric signals, and can deliver automatic records. Orig. art. has: 3 figures, 1 formula, and 1 table.

SUB CODE: 20, 13 / SUBM DATE: 26Oct64 / ORIG REF: 006 / OTH REF: 003

UDC: 535.321

Card 1/1 ell

ACC NR: AP7002666 SOURCE CODE: UR/0109/67/012/001/0087/0092

AUTHOR: Kozyrev, B. P.; Buznikov, A. A.; Loshakova, V. V.

ORG: none

TITLE: Transparency of oxide coating of cathodes in electron tubes

SOURCE: Radiotekhnika i elektronika, v. 12, no. 1, 1967, 87-92

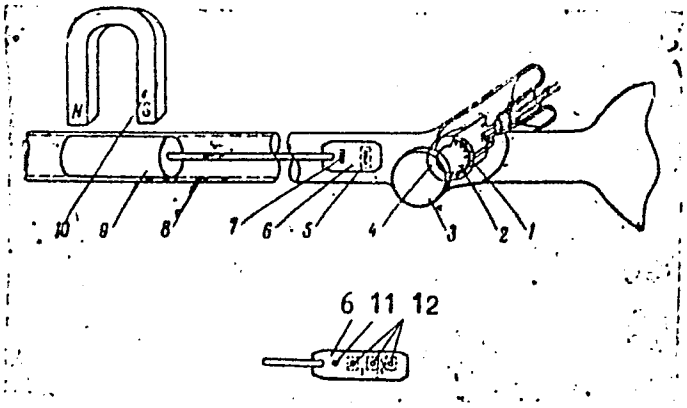
TOPIC TAGS: alkaline earth oxide, electron tube cathode, transparency

ABSTRACT: The transparency of oxide-coating samples prepared from (Ba, Sr, Ca) CO_3 subjected to the conventional nickel-backing cathode calcination was measured in a special 10^{-6} -torr vacuum device (see figure). Parts: 1 - thermoelectric converter, 2 - its receiving area, 3 - inlet window, 4 - shield, 5 - oxide coating, 6 - nickel plate, 7 - slit, 8 - calibrated tube, 9 - iron cylinder, 10 - magnet, 11 - open port, 12 - oxide-covered ports. The spectral transparency of the coating was measured, at wavelengths within 1.5—9μ, by an IKS-12 spectrometer on samples 60—, 120—, 180-μ thick (density, 1.3 g/cm^3). Also, the integral transparency for black-body radiation at 500—1000C was determined. The results are

UDC: 621.385.032.001.512

Card 1/2

ACC NR: AP7002666



Special vacuum device for measuring transparency of oxide coating

shown graphically. Although the transparencies were measured at room temperature, the results are regarded as applicable to hot-cathode operating conditions (600—900C) on the basis of recent U. P. Oppenheim et al. experiments (J. Opt. Soc. Am., 1964, 54, 1, 127). "In conclusion, the authors wish to thank V. S. Parkhomenko for his help in selecting test specimens." Orig. art. has: 4 figures.

SUB CODE: 09 / SUBM DATE: 14Jul65 / ORIG REF: 005 / OTH REF: 004

Card 2/2

KOZYREV, D. F.

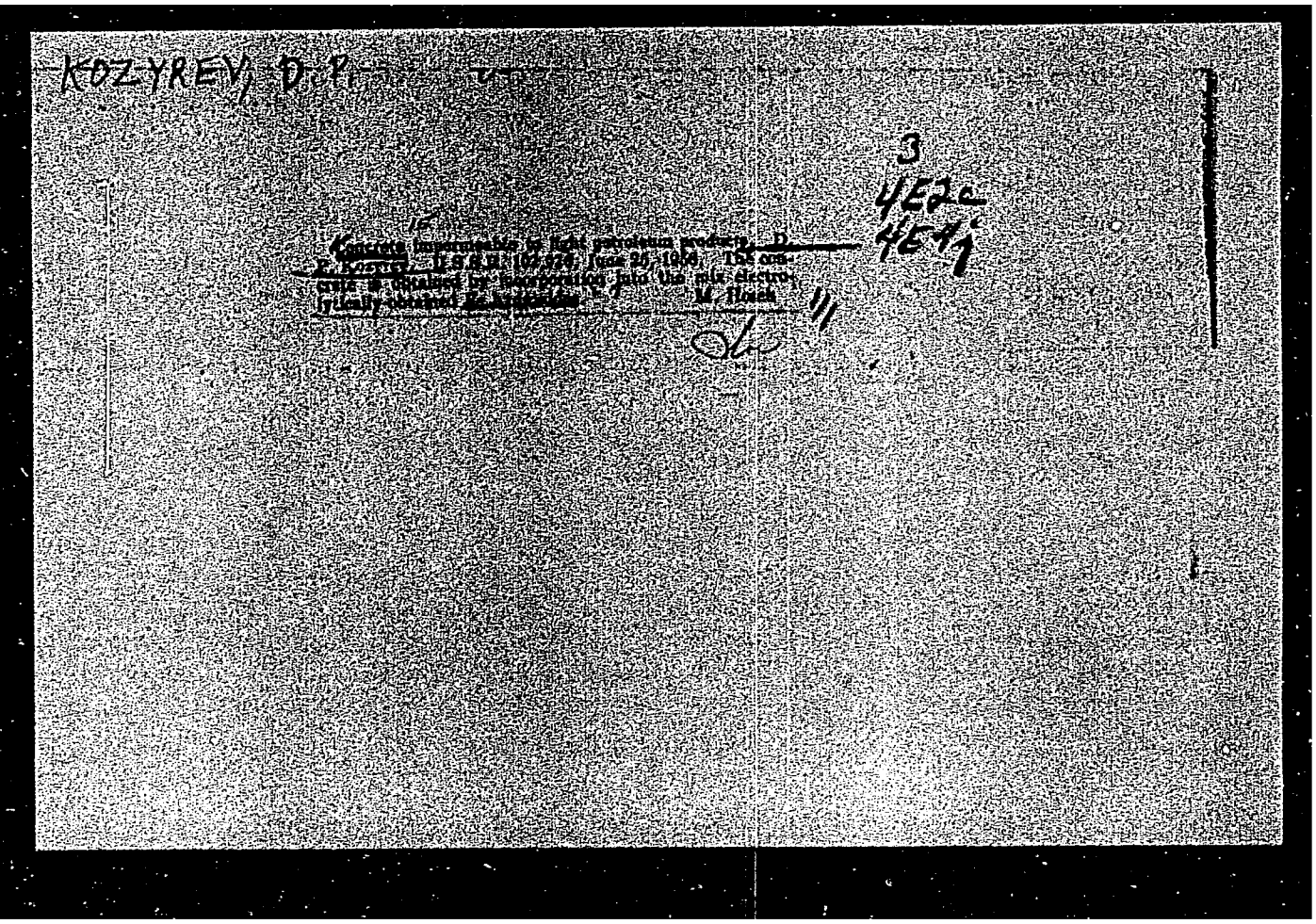
29783

Opyt planirovaniya i organizatsii syel'skokhozyaystvyennogo proizvodstva v zhivotnovodcheskikh sovkhozakh na primyerye sovkhoza "Stepnoy", Voronyezhskoy oblasti. Trudy Voronyezhsk. zoovyetin-ta, T. XI, 1948, s. 95-114

SO: LETOPIS' NO. 40

TRAPEZNIKOV, A.I.; CHUKIN, S.A.; BEDRIN, V.A.; KOZYREV, D.I.; BUTOVSKAYA, A.P.; YARKOVA, D.A.

Automation and mechanization of auxiliary operations in metalworking. Prom. energ. 17 no.11:10-11 N '62. (MIRA 15:12)
(Metalworking machinery)



GERSHTEYN, Yu.S., inzhener; KOZYREV, D.P., inzhener.

Fitting hydraulic gear drives by using a dynamometer. Sudostroenie 22 no.3:34-35 Mr '56. (MLRA 9:8)
(Marine engines)

LYUBAVIN, N.; KOZYREV, F.

Strange neighbors. Sov. profsoiuzy 17 no.14:24 Jl '61. (MIRA 14:7)
(Odintsovo (Moscow Province))--Freight and freightage)
(Vnukovo (Moscow Province))--Refractories industry)

KOZYREV, F. (Novomoskovsk, Tul'skoy oblasti)

At least they should have said a nice word. Izobr. i rats. no.1:25 Ja '62. (MIRA 14:12)

1. Spetsial'nyy korrespondent zhurnala "Izobretatel' i ratsionalizator".

(Novomoskovsk region--Coal mines and mining)

PETRUKHIN, S.; KOZYREV, G.

Reference book not answering the tasks of fixing industrial norms ("Manual of unified time norms Automobile repair." Reviewed by S. Petrukhin, G. Kozyrev). Avt. transp. 34 no. 6:39 Je '56. (MLRA 9:9)

(Automobiles--Repair) (Time study)

KOZYREV, O.

An outstanding brigade. Avt. transp. 37 no.2:53-54 F '59.
(MIRA 13:1)
(Taganrog--Transportation, Automotive)

KOZYREV, G.G.

Operation of the Ochakov brick yard on natural gas. Gaz. prom. 7 no.9:32-36 '62. (MIRA 17:8)

KOZYREV, G. P.

Metalworkers - Diseases and Hygiene

Improving the working conditions for metal-workers in the Stalino Province during the postwar five-year-plan. Gig. i san., No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, November, 1952. UNCLASSIFIED.

KOZYREV, G.S., dots.

Location of the center of gravity in fishes. Uch.zap. KHGU 33: 251-256 '50. (MIRA 11:11)

1. Kafedra zoologii pozvonochnykh Khar'kovskogo gosudarstvennogo universiteta (zaveduyushchiy kafedroy - prof. I.B. Volchanetskiy)
(Fishes) (Center of mass) (Swimming)

KOZYREV, G.S., dots.; NIKITENKO, N.A.

Variations in the skeletal structure of different domestic duck breeds. Uch.zap. KHGU 52:233-243 '54. (MIRA 11:11)

1. Kafedra zoologii pozvonochnykh Khar'kovskogo gosudarstvennogo universiteta (zav. - prof. I.B. Volchanetskiy).
(Duck breeds) (Bones)

KOZYREV, G.S., dots.; KEL'MAN, N.I.

Variations in the development of leg muscles in different duck breeds. Uch.zap. KHGU 52:245-263 '54. (MIRA 11:11)

1. Kafedra zoologii pozvonochnykh Khar'kovskogo gosudarstvennogo universiteta (zav. - prof. I.B. Volchanetskiy).
(Duck breeds) (Extremities (Anatomy))

KOZYREV, G.S., dots.; GAYDUKASOVA, V.N.

Differences in the mobility of leg joints in different domestic duck breeds. Uch.zap. KHGU 52:265-269 '54. (MIRA 11:11)

1. Kafedra zoologii pozvonochnykh Khar'kovskogo gosudarstvennogo universiteta (zav. kafedroy prof. I.B. Volchanetskiy).
(Duck breeds) (Joints) (Extremities (Anatomy))

USSR/Human and Animal Morphology. Skeleton. S

Abs Jour: Ref Zhur-Biol., No 15, 1958, 69654.

Author : Kozyrev, G.S.
Inst : Khar'kov University and Scientific Research Institute of Biology and Biological Faculty.
Title : Certain Findings on the Biomechanics of the Talocalcaneal and the Talocalcaneonavicular Joints in Man.

Orig Pub: Uch. sap. Khar'kovsk. un-t, 1957, Vol. 79, and Tr. N.-i. in-ta biol. i biol. fak., 1957, Vol. 26, 99-117.

Abstract: The author considers the joints of the lower extremities in relation to their supportive functions, and especially points out the mechanism which limits dorsiflexion of the foot, the possibility of

Card : 1/3

rotational movement in the talocalcaneal joint upon maximum plantar flexion, and the influence of the ligaments and certain muscles on the basic joints of the foot. The formation of the block of the astragalus is explained by the circular movement of the tibia in the talocalcaneal joint while walking. With strong plantar flexion there is no movement in the talocalcaneal joint. Determinations were made of the precise form of the joint surfaces of the calcaneal bone; this form represents a part of the surface of a frustrum of a cone. The axis of the talocalcaneonavicular joint was established as passing through the center of the head of the astragalus, forming with the axis of the talocalcaneal joint an angle of

USTINOV, A.A., doktor biolog.nauk; KOZYREV, G.S., dotsent, kand.biolog. nauk

"Hematological atlas of farm and laboratory animals" by V.N. Nikitin. Reviewed by A.A.Ustinov, G.S.Kozyrev. Veterinariia 36 no.6:85-86 Je '59. (MIRA 12:10)
(Veterinary medicine) (Blood--Diseases)
(Nikitin, V.N.)

KOZYREV, G.S.; ZHUKOVA, S.V.

Age peculiarities of Wallerian degeneration of peripheral nerves in rats. Uch. zap KHGU 108:263-269 '60. (MIRA 14:3)

1. Kafedra zoologii pozvonochnykh Khar'kovskogo gosudarstvennogo universiteta.
(DEGENERATION, FATTY) (AGE) (NERVES)

KOZYREV, I.

Industry - Organization, Control, Etc.

Ways of increasing the quality of production. Vop. ekon. no. 5, '52.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

KCZYREV, I. F.

Vnutrizavodskii khozraschet i uchet ego rezul'tatov [Intra-plant accounting on a commercial basis and calculation of its results]. Moskva, Gosfinizdat SSSR, 1953. 84 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 9 December 1953

KOZYREV, Ivan Fedorovich; MOTOV, S., otvetstvennyy redaktor; RYBAL'CHENKO,R., redaktor izdatel'stva; LEBEDEV, A., tekhnicheskiy redaktor

[Accounting on state farms] Bukhgalterskii uchet v sovkhozakh. Moskva, Gosfinizdat, 1956. 119 p. (MIRA 9:11)
(State farms--Accounting)

KOZYREV, I. I.

KOZYREV, I.I. --"Solution of One Dirichlet Problem for Doubly-Connected Polygonal Regions." *(Dissertations for Degrees in Science and Engineering) Defended at USSR Higher Educational Institutions) Tomsk State U imeni V. V. Kuybyshev, Tomsk, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

* For the Degree of Doctor of Physicomathematical Sciences

KOZYREV, I.I.

Telecommunication workers of Svanetia. Vest. sviazi 24 no.11: 24 N '64. (MIRA 18:2)

KOZYREV, K.K.

Experimental work on increasing productivity of equipment and labor in weaving. Tekst. prom. 18 no.9:29-31 S '58. (MIRA 11:10)

1. Zaveduyushchiy tkatskoy fabrikoy Kalininskogo khlopchatobumazhnogo kombinata.

(Cotton weaving)

KOZYREV, K.K.; NIKITIN, V.A.

Use of electric trucks in weaving factories. Tekst.prom. 20 no.4:62-64 Ap '60. (MIRA 13:8)

1. Zaveduyushchiy tkatskoy fabrikoy "Proletarka" Kalininskogo khlopchatobumazhnogo kombinata (for Kozyrev). 2. Zamestitel' zaveduyushchego tkatskoy fabrikoy "Proletarka" Kalininskogo khlopchatobumazhnogo kombinata (for Nikitin).
(Textile factories--Equipment and supplies)
(Industrial electric trucks)

KOZYREV, M.

Shortcomings of the tables used in computing the water and foam delivery. Pozh.delo 3 no.4:25 Ap '57. (MLRA 10:7)
(Pumping machinery--Tables, calculations, etc.)

KOZYREV, M.; SKVORTSOV, A. (Yaroslavl').

Applied physical training of firemen. Pozh. delo 4 no.5:13-14 My '58.
(Fire prevention--Study and teaching) (MIRA 11:5)

SAMARIN, V.G.; TSYPLUKHIN, V.F.; KOZYREV, M.A.

Methodological prerequisites of the use of A.A. Ivanov's slot type photographic wave recorder. Trudy MGI 20:51-57 '60.
(MIRA 13:10)

(Oceanographic instruments) (Waves)

LEVCHENKO, S.P.; TSYPLUKHIN, V.F.; KOZYREV, M.A.; SPIRIDONOV, A.V.

Studying the roll and pitch of the expeditionary ship "Mikhail Lomonosov." Trudy MGI 20:88-95 '60. (MIRA 13:10)
(Mikhail Lomonosov (Steamship)) (Stability of ships)

L 25321-65 EWT(1) GW

ACCESSION NR: AT5002847 S/3095/64/031/000/0063/0068

AUTHOR: Kosyrev, Ye. A.

TITLE: Correlation functions and spectral density of the pitch amplitude of the scientific research vessel "Mikhail Lomonosov"

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 31, 1964. Issledovaniya morskogo volneniya (Study of sea swell), 63-68

TOPIC TAGS: oceanology, scientific research vessel, disturbing acceleration, ocean wave, pitch amplitude

ABSTRACT: It is of great practical importance to study the spectral density of the pitch amplitude of vessels. This is particularly true of scientific research vessels, which carry extremely accurate and sensitive instruments. This paper gives the results of investigations of the correlation functions and spectral density of the pitch amplitudes of the scientific research vessel "Mikhail Lomonosov". The studies were made in the North Atlantic. Formulas are derived expressing the relationship between the degree and character of wave development and the pitch of a vessel. The period of natural pitch and vertical oscillations of the "Mikhail Lomonosov" is 6,0 sec. It is noted that a vessel, constituting a dynamic

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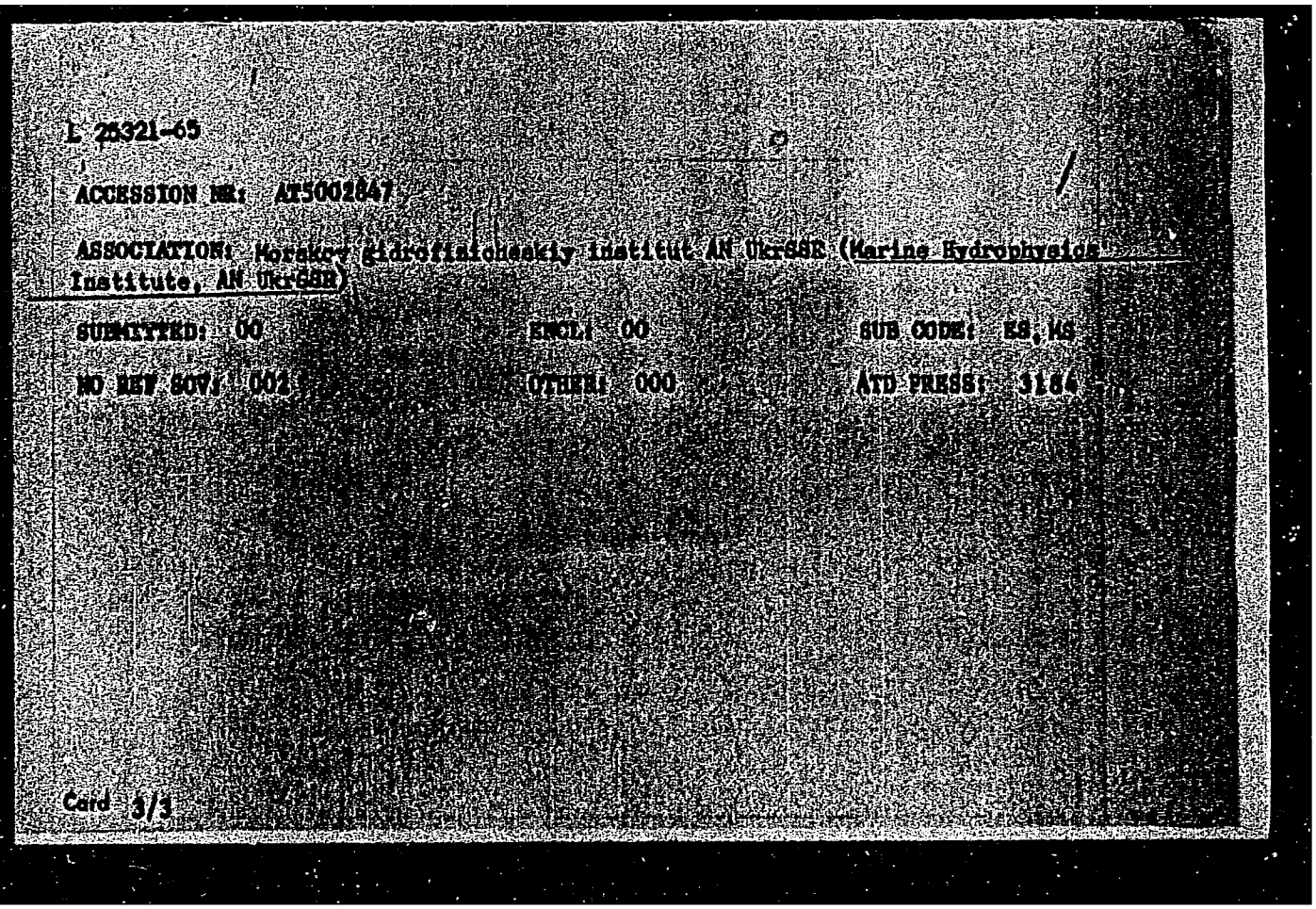
L 25321-65

ACCESSION NR: AT5002847

system, possesses some frequency characteristics and has a definite pass band. Ocean waves have a complex character in most cases and consist of several systems. When waves are poorly developed the vessel usually reacts at frequencies close to the natural frequency. As the waves become higher (onset of storm), the ocean waves approach a two-dimensional form, the wave height and period increase, and, therefore, the induced force and its period increase. The data in this paper indicate that the pass band of pitch for the "Mikhail Lomonosov" tends to short periods of 5.5 sec. The shift of the spectral density maximum in the direction of long periods is caused by an increase in the principal period of the waves with a simultaneous increase in their heights. In the case of pitch at sea, the length of the waves was 20--25 m, which corresponds to periods of induced force of about 4 sec. The pitch amplitudes for the "Mikhail Lomonosov" were generally insignificant. It is demonstrated that the form of the correlation function and the spectral density of pitch amplitudes are dependent on the stage of development of the waves acting on the vessel. When the waves are small, the vessel reacts at periods close to the period of natural pitch and vertical oscillations. When the waves are high, the pitch parameters are determined by the wave parameters, and the pitch correlation function has the form of a fading cosine. Orig. art. has: 5 formulas, 6 figures, and 1 table. [08]

Card 2/3



L 25321-65

ACCESSION NR: AT5002847

ASSOCIATION: Morskoy gidrofizicheskiy institut AN UkrSSR (Marine Hydrophysical Institute, AN UkrSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, MS

NO REF SOV: 002 OTHER: 000 ATD PRESS: 3184

Card 3/3

ACCESSION NR: AP4043756 S/0016/64/000/008/0045/0050

AUTHOR: Aleksandrov, N. I.; Gefen, N. Ye.; Voronin, Yu. S.; Yezepchuk, Yu. V.; Kozyrev, M. B.; Lebedinskiy, V. A.; Nikonov, I.V.; Runova, V. F.; Tamarin, A. L.; Filippenko, A. I.

TITLE: Further experimental studies of the efficacy of chemical anthrax vaccine

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 8, 1964, 45-50

TOPIC TAGS: vaccine, antigen, anthrax

ABSTRACT: Rabbits were vaccinated with unsterilized anthrax antigen, formalin-sterilized anthrax antigen, and live CTH vaccine, then infected with a virulent strain of B. anthracis. Comparison of results for the three groups showed no difference in efficacy between the unsterilized antigens containing viable CTH cells and the formalin-sterilized antigen. The survival rate was 11 out of 12 rabbits in the first group, 9 out of 11 in the second group, and 11 out of 11 in the third. All the controls died. The immunogenic effect of the antigen

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thus neither depends on nor is enhanced by the presence of viable cells in the vaccine. Formalin-sterilized antigen was used in the remainder of the experiments. The dependence of the degree of immunity induced on the size of the vaccination dose was also investigated in rabbits. The level of immunity was directly dependent on dose size: less than half (5 out of 12) of the rabbits vaccinated with 50 mg of antigen survived infection with 100 Dlm of virulent B. anthracis. Larger doses (100 mg and 300 mg) were about equally efficacious (survival of 6 out of 9 and 7 out of 9 rabbits). All the controls died. The dependence of immunogenic effect on the number of injections into which the vaccination dose is split and on the time interval between them was studied next. A total vaccination dose of 100 mg was administered in one, two, and three injections. Up to 20 days following completion of vaccination, the number of injections made no real difference in immunogenic effect. Mortality increased sharply when immunity was tested 40 days after completion of the vaccination series, however. The immunity produced by live CTH vaccine was longer lasting, and did not fall off sharply until 80 days after vaccination. It should be noted that the CTH dosage

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used (250 x 10^6 spores) was five times the dose recommended for humans. The efficacy of anthrax antigen was also studied in rhesus monkeys, in which 300 mg of antigen administered in either two or three injections produced a somewhat stronger immunity than did the live CTH vaccine in human-size doses. A final experiment was conducted to determine the efficacy of "native-sorbed" antigen concentrate (obtained by $Al(OH)_3$ precipitation of the culture filtrate without first treating the latter with acid or alcohol). This process not only yields an antigen which is more effective than that obtained by alcohol sorption, but produces it in quantities 15 times greater than the yields attainable by the alcohol process. The results of the experiment showed the immunogenic activity of "native-sorbed" antigen to be about the same as that of acid-sorbed antigen. In view of the much higher yield of the native-sorbed antigen concentrate, its use would seem to be preferable to that of the others. These concentrates produced practically no local reaction, unlike the formalin-sterilized antigen used in the earlier experiments. Orig. art. has: 3 tables.

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ACCESSION NR: AP4043756

ASSOCIATION: none

SUBMITTED: 28May63 ENCL: 00

SUB CODE: CB, LS NO REF SOV: 003 OTHER: 000

Card 4/4

YERMAKOV, V., master-povar; STERLIKOV, A., master-pover (g.Alma-Ata); TUL'CHINSKIY, N., master-povar (g.Kiyev); KULINKOVICH, Yu., master-povar (g.Minsk); KOZYREV, N., master-povar (Moskva) AVDUSHEV, M., master-povar(g.Riga); ZOLOTUKHIN, S., master-povar (g.Tashkent); MEZHGAYLIS, M. [Mezgailis, M.], master-povar (g.Riga); TURSUNOV, A., master-povar (g.Tashkent); MARTOS, N., master-povar (g.Noril'sk)

Show the example, share the experience. Obshchestv. pit. no.8:37-40 Ag '61. (MIRA 14:10)

(Cookery)

L 42916-66 FSS-2/EWT(1) TT/GW

ACC NR: AP6022379 SOURCE CODE: UR/0029/66/000/003/0016/0019

AUTHOR: Kozyrev, N. (Professor)

ORG: None

TITLE: From Moon volcanos to Venus volcanos

SOURCE: Tekhnika molodezhi, no. 3, 1966, 16-19

TOPIC TAGS: Moon, lunar crater, lunar temperature, Venus planet, astronomic personnel, astronomic observatory

ABSTRACT: In connection with the soft landing of the "Luna-9" station on the Moon surface, the contents of an interview given by Professor N. A. Kozyrev, at the Pulkovo Observatory, are presented. The main question discussed in this interview is the volcanic activity of craters on the Moon and the planet Venus. On the basis of Kozyrev's first discovery (Nov. 3, 1958) and further investigations, the volcanic activities of lunar craters Alphonsus and Aristarchus are now generally accepted. It is proven that the observed flares are indeed originated in the craters and not induced by the Sun luminescence. The volcanic activities, however, are rather weak. Useful information on the Moon surface is expected from various space vehicles. It is stated, however, that old data collected from the Earth are also valuable. Many of these data should be compared with the new ones. An example of comparison of explosion flares (observed by Herschel in 1783) with hot spots (discovered by Frank Low in 1965) leads to a possible existence of

Card 1/2

KOZYREV, N. A.

Zingerman, A. S., Kozyrev, N. A., and Shishman, D. V. "An investigation of the in-phase stability of the insulation of rotary electrical machines," Trudy Leningr. politekhn. in-ta im. Kalinina, 1948, No. 3 p.126-40.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

KOZYREV, N. A.

The following is among dissertations of the Leningrad Polytechnic Institute imeni Kalinin:

"Investigation of the Main Insulation of High-Voltage Electrical Machines." 13 April 1953. The electric strength and aging of the insulation of machines were investigated; the magnitudes of test voltages were established. A procedure was developed for prophylactic tests of the insulation of electrical machines on the basis of the appearance of different insulations defects.

SO: M-1048, 28 Mar 56

1. KOLYBEV, N.A.

2. USSR (600)

4. Electric Machinery - Testing

7. Selecting voltage for testing the insulation of electric machines, Elek.sta. 24 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

KOZYREV, N.A., kandidat tekhnicheskikh nauk.

Lasting dielectric strength of the principal insulation of electric machines. Elek.sta. 25 no.3:24-25 Mr '54. (MLRA 7:6)
(Electric insulators and insulation)

KOZYREV, N.A., kandidat tekhnicheskikh nauk, dotsent; LITVINOVA, Ye.L., inzhener.

Electric strength of winding insulation of high-voltage electric machines. Elektrichestvo no.8:68-71 Ag '56. (MLRA 9:10)

1.Leningradskiy politekhnicheskiy institut imeni Kalinina.
(Electric insulators and insulation)

KOZYREV, N.A., kandidat tekhnicheskikh nauk.

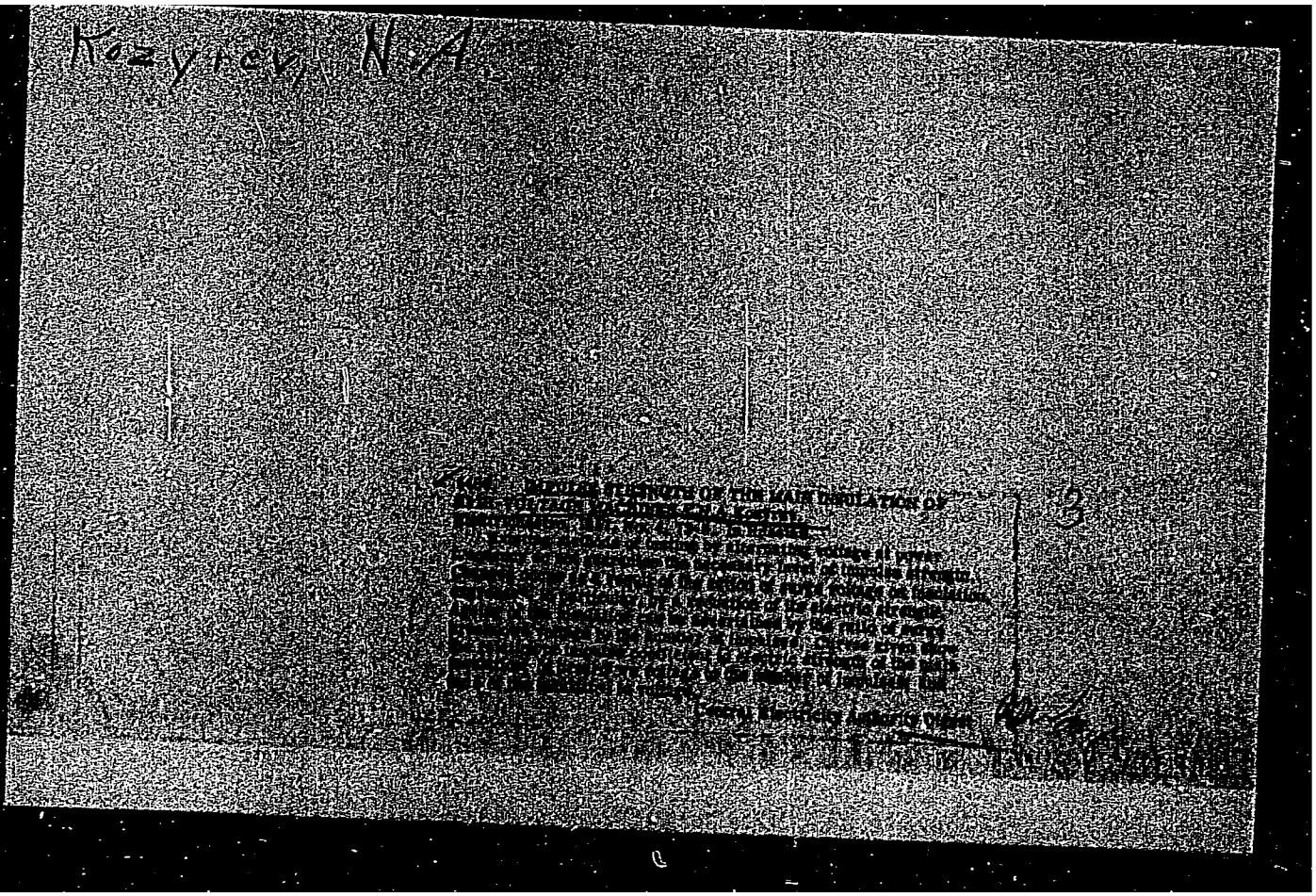
Reinsulation of high-voltage electric machinery. Elek.sta.27 no.1: 29-32 Ja '56. (MLRA 9:6)
(Electric insulators and insulation)

KOZYREV, N.A.

SKORIK, N.S., inzhener; TSUKERNIK, S.V., inzhener; LYSAKOVSKIY, G.I., kandidat tekhnicheskikh nauk; ZVEZDKIN, V.N., inzhener; IZRAYELIT, G.B., inzhener; KOZYREV, N.A., kandidat tekhnicheskikh nauk; KULAKOVSKIY, V.B., kandidat tekhnicheskikh nauk; KARAMZIN, A.P., inzhener; ALEKSEYEV, S.V., inzhener.

Electrical strength of stator winding insulation in 6-6. 6 kv electric machines. Elek.sta. 27 no.4:38-51 Ap '56. (MLRA 9:8)

1. Khar'kovskiy elektromekhanicheskiy zavod (for TSukernik); 2. Donbassenergo (for Lysakovskiy); 3. Lenenergo (for Izrayelit); 4. LPI (for Kozyrev); 5. TSentral'naya nauchno-issledovatel'skaya elektrotekhnicheskaya laboratoriya (for Kulakovskiy); 6. Sverdlovenergo (for Karamzin); 7. Mosenergo. (for Alekseyev).
(Electric insulators and insulation--Testing)



AUTHOR: Kozyrev, N.A., Candidate of Technical Sciences. 104-2-16/38

TITLE: Inspection of the condition of the insulation of electrical machines by its mechanical characteristics. (Kontrol sostoyaniya izolyatsii elektricheskikh mashin.)

PERIODICAL: "Elektricheskie Stantsii" (Power Stations), 1957, Vol.28, No.2, pp. 67 - 69 (U.S.S.R.)

ABSTRACT: Objective methods of determining the mechanical strength of insulation do not exist, neither is there reliable experimental information about the relationship between electrical and mechanical strength. Existing electrical methods do not reveal defects of mechanical origin.

Insulation in stator slots is subject to vibratory compression and that in the end windings to vibratory bending. It, therefore, seems reasonable to inspect the mechanical condition of insulation by a vibratory method. Such a method was developed and tests carried out with it are described. Some 258 specimens were subjected to 11 160 000 vibrations and the following conclusions were drawn from statistical analysis of the results. Vibration damages the micanite and increases the probability of superposition of weak places in micafoil, the discharge path becomes shorter and the electric strength is reduced. Hence the mechanical condition of the

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Inspection of the condition of the insulation of electrical machines by its mechanical characteristics. (Cont.)104-2-16/38

insulation can be checked by an electrical measurement. The reduction in the electric strength depends on the number of vibrations and not their frequency. Ageing was not demonstrated on the part of the specimen that corresponds to the free part of the end windings of a machine perhaps because enough tests were not made. Vibrational ageing of that part of the specimen corresponding to the place where the windings leave the slots gives a definite relationship between the number of vibrations and the breakdown voltage - the results are given in the form of graphs. After vibration 2/3rds of the failures occurred on the wide sides of the bars whilst on unaged bars this ratio is only 1/3rd. Of these 2/3rds, 72% of the breakdowns occur on the side of the insulation that is in compression and 28% on that which is in tension. The compression and extension are in a plane perpendicular to that of breakdown. New insulation withstands three times as many vibrations as insulation that has been in use for 26 000 hours. The results given are mainly of methodological interest since they demonstrate the possibility of inspecting the mechanical strength of insulation by a simple method. It may prove better to use vibrations of smaller amplitude than was done

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Inspection of the condition of the insulation of electrical machines by its mechanical characteristics. (Cont.)104-2-16/38

here but to use a greater number of them. It is not daimed that this first work is complete and it does not give exhaustive criteria and make recommendations which can be used in industry. These can only be based on accumulated experience and it is, therefore, advisable to carry out further experiments including tests on bars that have failed and windings that are due for replacement.

There are 4 figures.

AVAILABLE:

Card 3/3